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Uncertain Exposures and the Privilege of Imperception:

Activist Scientists and Race at the U.S. Environmental Protection Agency

*By Michelle Murphy**

ABSTRACT

This paper locates the EPA national headquarters within the racialized local geography of southwest Washington, D.C. By focusing on the formation of a scientist union and the union's struggle to make visible an episode of chemical exposure in its own offices, the paper connects the work of racialized privilege with the difficulty of proving chemical exposures in the 1980s.

INTRODUCTION

> These things happen to people in poor areas. Society is set up in such a way that it is the poor and the uneducated who suffer the main impact of natural and man-made disasters. People in low-lying areas get the floods, people in shanties get the hurricanes and tornadoes. . . . I'm not just a college professor, I'm a head of a department. I don't see myself fleeing an airborne toxic event.
> —Jack Gladney in Don DeLillo's novel *White Noise* (1985)[1]

What happens when chemical exposures do not obey systems of privilege? Society is set up to protect the privileged from toxic events, or so the neurotic protagonist of the novel *White Noise,* Jack Gladney, insists. In the novel, Gladney's affluence produces both an anxiety and a blindness about his own vulnerability to errant plumes and accidental spills. When a toxic cloud from a train accident floats over his suburban neighborhood, Gladney finds himself on the run despite his worldly advantages. Even systems of privilege can disappoint.

"White noise" is a technical term describing a steady complex unobtrusive sound, such as the drone of a fan, that drowns out, or makes imperceptible, other surrounding sounds. As a metaphor, white noise suggests that imperception can be produced.

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[1] Don DeLillo, *White Noise* (New York, 1985), 114–7.

Perception and subjectivity in modernity, as the historian Jonathan Crary argues, is characterized by historically specific modes of paying attention.[2] Attention, moreover, always involves disengaging from a broader field of stimuli for the sake of focusing on, isolating, and rendering intelligible a more narrowly-delineated set of phenomena. In other words, focusing on a single signal entails a learned inattention to other noise. Thus modern (and postmodern) subjects apprehended the persistent environmental bombardments that surrounded them through strategic *suspensions of perception.*[3] These suspensions of perception, moreover, resulted in not just passive disengagement but also production of historically specific terrains of invisibility, or what I call regimes of imperceptibility.

This essay explores imperceptibility and its relation to chemical exposures and race through a case study of activism by government scientists in the U.S. Environmental Protection Agency (EPA), the federal agency charged with investigating chemical exposures and setting national standards. Even more narrowly, this paper will focus on one idiosyncratic event at the EPA: the political activism of EPA scientists organized around an incident of chemical exposure at the agency's own Washington, D.C., headquarters in the 1980s. Through workplace activism and unionization, these scientists sought to resist the production of uncertainty and imperceptibility generated at the nexus of state, corporate, scientific, and juridical practices. At the same time that the EPA was developing national standards and embroiled in questions of scientific uncertainty, it was also being shaped by local racialized geographies of the particular neighborhood in Washington, D.C., in which it stood.

In the late-twentieth-century United States, both critics of and apologists for racism typically saw it as an issue concerning the disadvantaging of people with marked racialized identities, often called "visible minorities," emphasizing the role of perception in defining difference. Scholarly attention to relationships between racism and science, including environmental issues, has followed this same pattern. Historians of science have tended to take up questions of race only when examining acts of racism or when "race" has been the subject of science. Much less attention has been paid to the inverse subject of racialized disadvantage—the work of racialized privilege.[4] Furthermore, virtually no attention has been paid to the work of racialization in scientific practices not explicitly about race. One of the reasons this gap exists is that racialized privilege itself has often operated through its invisibility to those who possessed it and thus was rarely named as such.[5] It is difficult to research the work of race when historical actors did not mark it themselves.

In contrast to the early twentieth century, when those who benefited from and upheld white supremacy explicitly and frequently named and invoked it, the desegre-

[2] Jonathan Crary, *Suspensions of Perception: Attention, Spectacle, and Modern Culture* (Cambridge, Mass., 1999).

[3] Ibid.

[4] Important contributions to the study of white privilege in science include Warwick Anderson, "The Trespass Speaks: White Masculinity and Colonial Breakdown," *American Historical Review* 102 (1997): 1343–70; and Jill Morawski, "White Experimenters, White Blood, and Other White Conditions: Locating the Psychologist's Race," in *Off White: Readings on Race, Power, and Society,* ed. Michelle Fine, Lois Weis, Linda Powell et al. (New York, 1997), 13–28.

[5] On white privilege see Richard Delgado and Jean Stefancic, eds., *Critical White Studies: Looking Beyond the Mirror* (Philadelphia, 1997); Brigit Brander Rasmussen, Erick Klinenberg, Irene Nexica et al., eds., *The Making and Unmaking of Whiteness* (Durham, N.C., 2001); George Lipsitz, *The Possessive Investment in Whiteness: How White People Profit from Identity Politics* (Philadelphia, 1998).

gating cold war era produced a liberalism that provided a newly-articulated and powerful refashioning of "race" as a social, rather than biological, phenomenon. Racism was increasingly defined as an individually held psychological prejudice that prevented the ideal colorless meritocracy. Race was thus an artifact of color vision. In turn, whiteness could be held as an unraced identity; its very colorlessness fostered a belief among those who enjoyed it in the possibility of a better, "color-blind" society.[6] By the 1980s, the colorless location of "whiteness" and the confinement of racism to the realm of the psychological encouraged white U.S. citizens to suspend their awareness of persistent racialized distributions of privilege and to look only for expressions of racialized disadvantage. White privilege operated through this regularized suspension of perception—in other words, through a regime of imperception. Instead of government-sanctioned signs over water fountains and doorways, in the late twentieth century white privilege was generated, like white noise, precisely by "seeming not to be anything in particular."[7]

This paper seeks to explore the inverse of how U.S. communities of color theorized race in their development of environmental justice—that is, how the practice and activism of predominantly white state environmental scientists in the 1980s was shaped by the racialized location of their work and lives. I use the term "racialization" to underscore that "race" was not a possession of persons prior to social arrangements of power but rather produced by those arrangements. Likewise, individuals did not own privilege. They enacted and generated it both intentionally and unintentionally by virtue of pervasive racialization. Instead of asking whether individual scientists held racist views, this paper tries to understand how scientists' various political and scientific positions were shaped by the racialized world in which they lived. Thus this paper takes up the difficult task of connecting two different, yet coexisting, regimes of imperceptibility in late-twentieth-century America: first, the uncertainty of chemical exposures, and second, the unmarked location of racialized privilege.

RACING AND PLACING THE EPA

The physical condition and location of the EPA's headquarters, in southwest Washington's Waterside Mall, was symbolic of both the inequalities within the capital and the agency's neglect and low standing under the Reagan administration. An ugly, beige, concrete and glass complex, Waterside Mall was the direct result of one of the federal government's biggest urban renewal programs of the 1960s. Previously, the southwest neighborhood had been notorious for its alleyway slums, in which the city's poorest black residents were crowded together by a segregated housing market.[8] The bulldozing and redevelopment of the area displaced more than 10,000 African American "alley dwellers."[9] In place of low-income housing came a shopping mall called Waterside, flanked by two twelve-story towers of upscale apartments. When, in an era of white flight from city centers, the apartment towers failed to attract renters,

[6] Howard Winant, "White Racial Projects," in Rasmussen et al., *Making and Unmaking of Whiteness* (cit. n. 5), 97–112.

[7] Richard Dyer, "White," *Screen* 29 (1998): 44.

[8] James Borchert, *Alley Life in Washington: Family, Community, Religion, and Folklife in the City, 1850–1970* (Urbana, Ill., 1980).

[9] Howard Gillette Jr., *Between Justice and Beauty: Race, Planning, and the Failure of Urban Policy in Washington, D.C.* (Baltimore, 1995).

the real estate developer leased his building to the federal government, which in turned assigned it in 1971 to the newly-founded EPA.

The presence of the EPA headquarters in this downtown area was part of the more general schizophrenic character of Washington, D.C., a finely segregated southern city profoundly shaped in terms of "black" and "white." Yet serving as the nation's capital, it was also a meeting place for the North and the South, as well as for the national and the local.[10] In the EPA's southwest neighborhood, located within walking distance of the National Mall, grand government agencies and luxury apartments sat uneasily next to public housing, racialized unemployment, and homelessness. Waterside was also just a ten-minute drive from the site of one of the most violent riots that followed Martin Luther King's 1968 assassination. It was a neighborhood to which many of the poor residents of southwest alleys had been displaced; some of whom lost their neighborhood, yet again, in the riot's flames.[11] Nonetheless, segregation was imperfect; in 1989 African Americans from a wide spectrum of classes made up 61 percent of the southwest neighborhood's residents, while European Americans made up 35 percent.[12] Racialized spaces were minutely distributed within neighborhoods, buildings, and workplaces as much as between them.

The racialized geography of Washington, D.C., exemplified the persistence of geographic distributions of privilege that, as scholar George Lipsitz has argued, characterized the cold war era of government-mandated *desegregation.*[13] For example, large corporations accommodated state desegregation orders by channeling recently hired African Americans into racially segregated departments that relied on devalued technologies and skills.[14] Suburbanization and middle-class "white flight" during desegregation moved 4 million whites out of city centers, while the number of whites living in suburbs increased by 22 million from 1966 to 1977.[15] Access to mortgages, loans, the provisions of municipal services, and other distributions of government-sponsored privileges became correspondingly concentrated in the suburbs.[16] By 1993, the results of white flight meant that 80 percent of the nation's suburban whites lived in places with a black population under 1 percent.[17] In the District, 90.3 percent of European Americans lived in the suburbs, helping to make African Americans the vast majority of metropolitan residents. African Americans constituted 71.1 percent of the city's residents but only 8.2 percent of its suburban residents.[18]

[10] Steven Diner, "Washington: The Black Majority: Race and Politics in the Nation's Capital," in *Snowbelt Cities: Metropolitan Politics in the Northeast and Midwest since World War II,* ed. Richard M. Bernard (Bloomington, Ind., 1990), 247–65; Beverly W. Jones, "Before Montgomery and Greensboro: The Desegregation Movement in the District of Columbia, 1950–1953," *Phylon* 43 (1982): 144–54.

[11] Ben Gilbert, *Ten Blocks from the White House: Anatomy of the Washington Riots of 1968* (New York, 1968); Nelson Kofie, *Race, Class, and the Struggle for Neighborhood in Washington, D.C.* (New York, 1999).

[12] U.S. Bureau of the Census, *U.S. Census 1990,* demographic data for zip code 20024.

[13] Lipsitz, *Possessive Investment* (cit. n. 5).

[14] See, e.g., Venus Green, *Race on the Line: Gender, Labor, and Technology in the Bell System, 1880–1980* (Durham, N.C., 2001).

[15] Lipsitz, *Possessive Investment* (cit. n. 5), 7.

[16] In addition to Lipsitz, see Martha Mahoney, "Residential Segregation and White Privilege," and Karen Brodkin Sacks, "The GI Bill: Whites Only Need Apply," in Delgado and Stefancic, *Critical White Studies* (cit. n. 5).

[17] See sources in note 16.

[18] Robert Manning, "Multicultural Washington, D.C.: The Changing Social and Economic Landscape of a Post-Industrial Metropolis," *Ethnic and Racial Studies* 21 (1998): 337.

Such patterns of desegregation in Washington, D.C., also extended to workplaces of the federal government, which ever since passage of the Civil Rights Act of 1964 had hired large numbers of local African Americans to work within its bureaucracies. Within the EPA headquarters and Waterside Mall, if not in their home neighborhoods, predominantly white scientists and professionals had daily interactions with African Americans: in the shopping mall with African American customers, sales clerks, and cleaning staff and in the EPA itself with African American secretaries, administration assistants, and security personnel—and a few African American professionals. The passage from the shopping mall into the headquarters marked a boundary between local and national spaces as well as between majority African American and majority European American spaces. While the EPA has not published longitudinal data, in 2001 black workers made up more than half of the clerical staff at the agency's headquarters but only 8.2 percent of the professional class workforce, of which whites composed 81.5 percent.[19] It is also useful to look at racialization of "grade levels," the system by which seniority and pay is ranked in federal bureaucracies. White workers made up 87.9 percent of the highest rank, GS15, and only 21.8 percent of the lowest ranks, GS1–4; black workers composed the bulk of workers in the ranks below GS 9 and only a sliver, 6.8 percent, of the highest rank.[20]

While the EPA was physically situated in a particular neighborhood, its charge was to establish regulations and standards that would encompass the whole nation. By the 1980s, most people saw the agency as failing in that mission. A multitude of reasons explained why so many EPA investigators were thwarted in their efforts to make strong claims about the health effects of chemical exposures. For one, exposures themselves were often transient and complicated. For another, sometimes the failure was a product of the difficulty and uncertainty plaguing good faith efforts to stand up to the narrow scrutiny of juridical standards that asked scientists to find causality in an individual chemical signal separated from the white noise of the built environment. At other times, the failure was a product of the EPA's methods and instruments, originally designed to detect straightforward exposures in factory settings and not chronic or transient exposures in neighborhoods and offices. Thus a terrain of imperceptibility was hardwired into the very instruments investigators used. However, failure could also result from their positions as government scientists whose ability to communicate findings or design studies was strictly circumscribed by politically appointed administrators whose ideology often rejected the notion that the state should regulate capital. EPA scientists were awkwardly positioned as civil servants accountable to the citizens, the state, and corporations on the one hand, and as scientific spokespersons for "nature" and truth on the other.

Since the 1980 televised struggle at Love Canal, New York, which culminated sensationally in two EPA agents' being taken hostage by community women to force the government to help residents, EPA scientists have become the regular villains in all too common dramas around chemical exposures.[21] This plot line has agency investigators

[19] U.S. Environmental Protection Agency, *Affirmative Program Plan for Women and Minorities: FY 2002 Plan Update & FY 2001 Accomplishment Report* (Washington, D.C., April 2002), 49.

[20] Ibid, 52.

[21] Love Canal, a working-class neighborhood near Niagara, New York, was the site of one of the earliest and most-documented instances of grassroots toxic waste activism concerning the health effects of toxic waste disposal. See Allan Mazur, *A Hazardous Inquiry: The Rashomon Effect at Love Canal* (Cambridge, Mass., 1998).

arriving at the instigation of local community activism (as they did at Love Canal), and then failing to come up with evidence useful to or commensurate with residents' accounts. As sociologist Celene Krauss argues, the white working-class communities, especially women, who protested against toxic waste in the 1970s and early 1980s, saw their problems as tied to the failure of government-sponsored protections.[22] Lois Gibbs, an influential toxic waste activist who got her start at Love Canal, described her investment in the government this way:

> I grew up in a blue-collar community, it was very patriotic, into democracy. . . . I believed in government. . . . I believed that if you had a complaint, you went to the right person in the government. If there was a way to solve the problem, they would be glad to do it.[23]

It was when the state, often the EPA, failed to provide expected aid that women such as Gibbs became politicized as activists. The ill repute with which EPA scientists contended was reflected in the advice activists gave one another about government investigations:

> The government studies are also bogus. We just have to start out knowing that the Centers for Disease Control, the EPA, or any of these regulatory agencies are not telling the truth. When they come your way, tell them to go away. Tell them, "We don't need your studies." You don't need their studies, because then you are countering more than you were before they got there.[24]

For many grassroots activists, as well as environmental journalists, the agency was simply not trustworthy. In just a short span of time, the EPA had gone from optimistic offshoot of Earth Day to obstructer of environmental justice in many eyes.

Over the 1980s, this already unsatisfying situation turned worse; EPA scientists went from frustrated to obstructed. When Republican candidate Ronald Reagan was elected president in 1980, he was forthright about his anti-environmentalist, pro-industry, deregulation politics. The EPA—just ten years old when Reagan began his first term—had been founded in a reformist moment, when the expansion of the state was greeted with liberal optimism, guided by a "progressive" and technocratic conviction that objective scientific expertise would solve problems of the social and natural orders. Many of the scientists hired then believed their science could improve the nation if not the world.[25] The 1980s, however, brought a backlash against state regulation in the name of economic progress, and EPA scientists saw their positions as trustworthy and privileged experts expire. Reagan proposed a 60 percent slash in the agency's budget and a 40 percent cut in staff.[26] Though the Democrat-controlled Congress put up some resistance, most cuts went through, and the administrative staff was overhauled.

[22] Celene Krauss, "Challenging Power: Toxic Waste Protests and the Politicization of White, Working-Class Women," in *Community Activism and Feminist Politics: Organizing across Race, Class, and Gender*, ed. Nancy Naples (New York, 1998), 129–50.

[23] Lois Gibbs, *Love Canal: My Story* (Albany, N.Y., 1982), 12.

[24] Quote from Patty Fraser in Robbin Lee Zeff, Marsha Love, and Karen Stults, eds., *Empowering Ourselves: Women and Toxic Organizing* (Arlington, Va., 1989), 13.

[25] For the history of how university industrial hygienists fashioned themselves in this way, see Christopher Sellers, *Hazards of the Job: From Industrial Disease to Environmental Health Science* (Chapel Hill, N. C., 1997).

[26] Robert Proctor, "The Reagan Effect," in *Cancer Wars: How Politics Shapes What We Know and Don't Know About Cancer* (New York, 1995).

Most detrimental was the appointment of Ann Gorsuch (1981–1983) as head of the EPA. Gorsuch filled the agency's upper administrative ranks with professionals who had made their livings defending industry against regulation. Rather than acting as the EPA's conservative steward, she set out to declaw the agency, stripping it of its regulatory capacity in practice if not in rule.[27] Gorsuch, nicknamed the "Ice Queen" within the agency, tacked up a brightly colored "hit list" in her office, a flagrant posting of career staff targeted for dismissal.[28] Scientists who resisted pressure to repress damning data or acted as whistleblowers could find themselves fired, harassed, or transferred to new positions in which their only tasks would be answering phones or filing papers. Reagan made Gorsuch's job easier by signing a series of executive orders that prevented the EPA from collecting information about a chemical for possible regulation without the Office of Management and Budget's (OMB) sanction. OMB only gave its sanction if the cost-benefit economic analysis it ran proved to be economical. The regulatory process could now be stopped before it even began, placing economic considerations squarely before those of science. Gorsuch was followed by William Ruckelshaus (1983–1985), who left his position at the timber company Weyerhaeuser, a frequent target of environmentalist groups. Next came Lee Thomas (1985–1989), who afterward became senior vice-president at the pulp and paper company Georgia-Pacific. At its nadir in the 1980s, the regulatory agency was being run, with little pretense at neutrality, by representatives of the companies it was supposed to regulate, a pattern of movement between industry and the agency that one critical EPA scientist labeled the "revolving door."[29]

Yet even under such difficult circumstances, EPA had instances when it successfully enforced a regulation or fined a company. However, such successes actually added to an unevenness of enforcement that exacerbated distributions of privilege and disadvantage.[30] The agency's tendency to levy its heaviest fines against those polluters near middle-class neighborhoods compounded widespread corporate strategies of locating garbage incinerators, dumps, and toxic waste sites near working-class or underemployed neighborhoods, neighborhoods constituted through racialized and geographic arrangements of power.[31] In the early 1980s, African American civil rights activists associated with the Washington-based United Church of Christ's Commission for Racial Justice gave this arrangement a name—"environmental racism." This term was defined as

> racial prejudice plus power. Racism is the intentional or unintentional use of power to isolate, separate and exploit others. . . . Racism confers certain privileges on and defends the

[27] On the history of the EPA during the 1980s, see Jonathon Lash, Katherine Gillman, and David Sheridan, *A Season of Spoils: The Story of the Reagan Administration's Attack on the Environment* (New York, 1990); Marc Land, Marc Roberts, and Stephen Thomas, *The Environmental Protection Agency: Asking the Wrong Questions* (New York, 1990).

[28] William Ruckelshaus, interview by Michael Gain, EPA History Office, Washington, D.C., Jan. 1993.

[29] William Sanjour, "EPA's Revolving Door," *Sierra Magazine* (Sept./Oct. 1992): 77.

[30] M. Lavelle and M. Coyle, "A Special Investigation; Unequal Protection: The Racial Divide in Environmental Law," *National Law Journal,* 21 Sept. 1992, S1–S16.

[31] See, e.g., General Accounting Office (GAO), *Siting of Hazardous Waste Landfills and Their Correlation with Racial and Economic Status of Surrounding Communities* (Washington, D.C., 1983), GAO/RCED- 83–168; Bryant Bunyan and Paul Mohai, "Environmental Injustice: Weighing Race and Class as Factors in the Distribution of Environmental Hazards," *University of Colorado Law Review* 63 (1992): 921–32. Robert D. Bullard, ed., *Confronting Environmental Racism: Voices from the Grassroots* (Boston, 1993).

> dominant group, which in turn sustains and perpetuates racism. . . . Racism is more than just personal attitude; it is the institutionalized form of that attitude.[32]

Analysts saw the concentration of pollution and hazard in African American and other disenfranchised groups' neighborhoods as a continuation of government-sanctioned unequal distributions of services such as housing, education, and health care.

Unionizing EPA scientists knew about disenfranchised communities' efforts to represent environmental problems through civil rights discourse in terms of the racialized and unequal distributions of hazards. The inaugural incident of environmental justice activism in Warren County, North Carolina, for example, even included a few EPA scientists as rally speakers. Moreover, over the 1980s community environmental activists had ceaselessly lobbied the agency to incorporate environmental justice analyses of racial disbursements of hazardous waste into its mandate.[33] Environmental justice critics of the EPA used civil rights legislation against inequality. Thus they employed a different strategy than had toxic waste activists, who used popular epidemiology to demonstrate chemical exposure and trigger a state-sponsored scientific investigation or pursue toxic torts. These two forms of activism depended on different stances toward the state. Critics of environmental racism portrayed the state as historically complicit in the production of racialized inequalities, while toxic waste activists tended to see the state as failing to secure protections that had been expectations in the past. What the movements shared, however, was a distrust of the EPA.

Caught between the activists' criticism and an antiregulation administration, a small group of EPA scientists, many with "backgrounds in environmental, political and labor activism," took the unusual and impressive step of organizing a union of "toxicologists, chemists, biologists, attorneys and other environmental professionals" in the name of scientific ethics.[34]

THWARTED SCIENCE

Chartered in 1983, the National Federation of Federal Employees (NFFE), Local 2050, represented approximately 1,200 EPA professionals.[35] The leadership was primarily composed of left-leaning white male senior scientists, many of whom had been with the agency since its inception, were dedicated environmentalists, and had risked their jobs as outspoken critics of EPA positions. The union argued that as government scientists they had "a duty and a right to perform our work in an ethical environment, and to see that our work is not distorted, misrepresented, stolen or lied about in devising false cover for Agency policies."[36] Their professional ethics, they argued, were being corrupted through the influence of "economically powerful industries that are

[32] United Church of Christ Commission on Racial Justice, *Toxic Wastes and Race in the United States* (New York, 1987), ix–x.

[33] On the relationship between environmental justice and the EPA, see Stephen Sandweiss, "The Social Construction of Environmental Justice," in *Environmental Injustices, Political Struggles: Race, Class, and the Environment,* ed. David Camacho (Durham, N.C., 1998), 31–57.

[34] National Treasury Employees Union (NTEU), Chapter 280, "The Official History of NTEU Chapter 280: 17 years of Public Service at the EPA," April, 9, 2001, http://www.nteu280.org/history.htm (accessed 14 June 2001).

[35] In February 1998, members voted to change affiliation from NFFE to National Treasury Employees Union, Chapter 280.

[36] NTEU, Chapter 280, "The Official History" (cit. n. 34).

doing things harmful to the environment."[37] They claimed a lost "right" to a neutral work environment. The union's criticism was very much like that of toxic waste activists.

Through the union, EPA scientists fashioned themselves as champions of objectivity and spokespersons for nature.[38] The particular version of objectivity they upheld was that of traditional modern Western science, what Donna Haraway has called the "view from nowhere," which relied on scientists acting as "modest witnesses" who kept the details of their persons separate from the practice of their science.[39] This particular construction of objectivity dovetailed with the way white privilege functioned in postwar America—both relied on holding an unmarked and neutral location. Though a "view from nowhere" was produced by and supported racialized privilege, it was not necessarily a conservative ideology. It could also be deployed in a liberal frame to argue for the desegregation of science by asserting that the race, sex, class, or religion of a scientist was irrelevant to the scientific method. In positioning themselves as defenders of objective science, Local 2050 complained not of a disruption to the neutrality of their identities but rather of a violation by EPA administration to the neutrality of their workplace. As civil servants working for the nation's citizens, they had the "right" to a disinterested workplace in which they could execute their duty.

The union blamed the corruption of science in the EPA on the influence of large companies and industry-sponsored organizations on everything from the agency's promotions, to its research agendas, to the wording of its reports and brochures. The presence of corporate interests in environmental science even extended to experimental design and practice at the EPA. As practitioners of toxicological studies, the scientists knew that tinkering with humidity levels, changing strains of mice, modifying forms, or using stationary, rather than body-mounted, air samplers could determine whether a chemical exposure was detected or remained invisible.[40] They also knew that corporate scientists were expert at these same manipulations.

EPA administrators could be both flagrant and subtle in obstructing their own scientists. At their most flagrant, administrators would prevent scientists from going public with findings critical of powerful corporations. Anyone who went ahead risked ruining his or her career. At their subtlest, administrators could counter almost any positive finding by an EPA scientist by pointing to a nearly identical corporate-sponsored experiment that produced a negative or more ambivalent result. Uncertainty justified the need for the proliferation of yet more studies and the continuing tinkering with protocols. Ceaseless agency calls for more studies allowed the production of ever more ambiguities and thus the generation of uncertainty ad infinitum, helping to make regulation next to impossible.

This purposeful production of uncertainty was indeed the subtlest means of distorting the founding goals of the agency and serving the antiregulation agendas. The

[37] NTEU, Chapter 280, "Why We Need a Code of Professional Ethics," August, 25, 1999, http://www.nteu280.org/issues/NTEU-%20Professional%20Ethics.htm.

[38] Ibid.

[39] On the "view from nowhere," see Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York, 1991), 183–202.

[40] For a detailed analysis of how this worked at the EPA in the case of carpet, see the five-part series by activist Cindy Duehring, beginning with "Carpet, Part One: EPA Stalls and Industry Hedges While Consumers Remain at Risk," *Informed Consent* 1 (1993): 6–11, 30–3.

union fought to counter such tactics, as illustrated by its resistance to the production of uncertainty in its struggle with the EPA policy on the potential toxicity of new carpet. The union went so far as to commission separate experiments at one of the few independent toxicology labs in the United States. That lab found that some samples caused severe neuromuscular reactions in mice.[41] Yet, ultimately, because the carpet industry and an official EPA lab—when using a slightly modified experimental apparatus—could not replicate the independent lab's findings, the union could not successfully subvert the development of the EPA's industry-friendly carpet "green tag" program.

In the late twentieth century, the extreme difficulty of making visible the health consequences of chemicals became, I believe, the single most significant characteristic of "chemical exposures" as a scientific artifact. Yet rather than locating the problem in the way the EPA attempted to resolve questions of chemical exposure—that is, exclusively on the narrow terrain of laboratory toxicology—the union largely sought to hold on to the terms of their scientific practice by critiquing the conditions under which it occurred.

The formation of Local 2050, however, was motivated solely by the scientists' defense of state scientific practice against corporate interests. Though exceptional in many ways, their workplace activism was also part of a late-twentieth-century swell in unionization among government and office workers, one that went against the tide of a waning and beleaguered industrial labor movement. Through unionization, scientists were recognizing their devalued status. No longer glorified as the influential and disinterested arbiters of disputes between citizens and corporations about the consequences of industrial pollution, EPA scientists implicitly aligned themselves with the downtrodden proletarianized service sector rather than with the upper administration's managerial class. Thus the way they expressed their activism and its protection of objectivity was partially predicated on the conflicted assumption of a subjugated position in an era of undermined white privilege. Yet their ideology was the inverse of epistemological claims made in terms of identity politics (including feminist arguments), which typically argued that subjugated viewpoints provided better access to the truth.[42] Instead, members of Local 2050 saw their oppressive circumstances as disturbing the neutral ground they held as necessary for the production of good science.

ENVIRONMENTAL ANXIETY

As a union concerned with workplace conditions, Local 2050 soon became focused not just on the political but also on the environmental conditions in the agency's headquarters. There was, in fact, a nationwide surge of distress over the unexpected presence of chemical exposures inside nonindustrial, ordinary spaces such as office buildings. EPA scientists, whose very livelihoods connected the politics of environmental

[41] This study was eventually published as Rosalind C. Anderson, "Toxic Emissions from Carpets," *Journal of Nutritional and Environmental Medicine* 5 (1995): 375–86.

[42] See, e.g., Nancy Harstock, "The Feminist Standpoint: Developing the Ground for Specifically Feminist Historical Materialism," in *Discovering Reality: Feminist Perspectives on Epistemology, Metaphysics, Methodology, and Philosophy of Science,* ed. Sandra Harding and Merrill Hintikka (Dordrecht, 1983), 283–310; Sandra Harding, "From Feminist Empiricism to Feminist Standpoint Epistemologies," in *The Science Question in Feminism* (Ithaca, N.Y., 1986), 136–62; George Lukacs, "Reification and the Standpoint of the Proletariat," in *History and Class Consciousness* (Boston, 1971).

exposure and suspended perceptions, were not immune to this distress nor the way privilege shaped its articulation.

Pervasive white privilege was imperfect and insecure in a cold war period that was as much about emancipation and civil rights as about conservative containment.[43] Whites were losing the geographic and workplace monopolies they enjoyed before desegregation, while the intensification of globalized capital flows in the 1980s saw U.S. industrial jobs moved abroad and middle-class managerial jobs downsized. Anxiety triggered by new forms of insecurity abounded (brilliantly satirized by DeLillo), helping to create a middle-class "risk society" worried over errant chemical exposures that violated expected protections.[44] Chemical exposures were not confined to factories. They could come from consumer products, the construction materials of office buildings, passing luxury vehicles, perfect green lawns, designer pharmaceuticals, shiny blemish-free food, or plush carpets. Objects that were the very hallmarks of suburban privilege could let loose exposures that violated racialized protection.

The inability to absolutely contain chemical exposures through privilege prompted many middle-class Americans to ask nervously, Is it happening here? On the one hand, the regularity and expectedness of distributions of racialized privilege made it possible to displace unearned privilege on to the naturalness of place—bad things happen to people in low-lying areas or in scrubby parts of the country. Better yet, chemical accidents happened to people who lived in faraway places such as Bhopal.[45] On the other hand, illnesses such as breast cancer and leukemia indicated that no one was absolutely safe. While the environmental justice movement highlighted raced and classed distributions of toxic exposure, white middle-class America expressed its own version of environmental politics by seeking to isolate and prohibit all dangers, no matter how small, from the home, road, playground, and workplace. Thus not only were exposures themselves racialized and classed, but so, too, were environmental anxieties, shaped by an insecure yet pervasive white privilege.

The EPA headquarters was ripe to be identified as a "sick building" and environmental hazard. Under Reagan, conditions at the Waterside Mall represented the adverse workplace circumstances.[46] Approximately 5,000 agency staff members now crowded inside. A jumble of hallways led to a crazy quilt of tiny individual offices, most without windows, cut out of what had originally been apartments, creating a "warren of people crammed into rooms." In typical energy-efficient construction, those windows that did exist were unopenable. The building's interior was filthy and neglected: roaches and mice infested the offices, burnt-out light fixtures left corridors "dark for days," and toilets were often out of order. The air was stale, and vent grills were clogged with debris, grit, and fibrous matter that caused a fine black powder to settle on surfaces. In the words of its inhabitants, the building was "oppressive" and "a dull, dirty, and depressing place to work." One EPA manager drew a comparison to

[43] A. Yvette Huginnie, "Containment and Emancipation: Race, Class, and Gender in the Cold War West," in *The Cold War American West, 1945–89,* ed. Kevin Fernlund, (Albuquerque, 1998), 51–70.

[44] Ulrich Beck, *Risk Society: Towards a New Modernity,* trans. Mark Ritter (London, 1992).

[45] *White Noise* was published around the time of the Bhopal chemical disaster so coverage of Bhopal in the mainstream press and reviews of the novel occurred simultaneously.

[46] This description of Waterside Mall is compiled from my own observations during a visit in 1996, press coverage of the indoor pollution episode, the Indoor Air Quality and Work Environment Survey, and most importantly the approximately 1,200 essays EPA employees wrote on the back of the survey, administered in February 1989. The essay responses were compiled in an unpublished manuscript: Lance Wallace, "Preliminary Analysis of the Essay Question" (1991).

conditions of disadvantage outside the headquarters' door, writing, "I understand how poor housing project occupants feel"; another employee dramatically likened the conditions to ones in "Third World public hospitals."[47]

The administration tried to give the building a quick facelift in October 1987 by installing new carpet. Immediately, some EPA staff, including scientists, began to complain of tearing eyes, irritated throats, burning lungs, shortness of breath, crippling headaches, and dizziness.[48] As the carpet installation pushed its way through the building, the trickle of complaints became a torrent. The EPA's Emergency Response "SWAT" Team, usually held in reserve for toxic spills, was called in. The facilities management director reported the results at a staff meeting: 68 different airborne chemicals had been detected, but all were at concentrations "no more higher [sic] than your living room."[49] EPA scientists found themselves facing the same regime of imperceptibility that they had participated in through their fieldwork.

Local 2050 became consumed with the issue of the building's "indoor air quality," members channeling their challenge to corrupted science into proving the existence of harmful chemical exposures in the union's own workplace. Union leaders were fashioning themselves as defenders of the victims of exposure among their own. With their expert technical skills, EPA scientists had a unique insider opportunity to demonstrate how the detection of harmful exposures was purposefully avoided or, in other words, how suspensions of perception had been strategically generated at the agency.

Some of the sickest and most outraged employees formed the Committee of Poisoned Employees (COPE). With NFFE Local 2050 and the American Federation of Government Employees (AFGE), Local 3331—which represented clerical and other workers in the headquarters, many of them women and persons of color—organized a protest outside the building in May 1988. Approximately sixty employees assembled there, carrying signs festooned with upside-down EPA logos or declaring "EPA is a Superfund Site." Inspired by toxic waste activist practices of popular epidemiology, the EPA employees handed out a survey. Out of necessity, but not without a sense of drama, some of the sickest employees had begun wearing gas masks to work. Placards reading "Canaries in a Coal Mine" underlined the belief that if chemical exposures could be found in white-collar workplaces, they might occur anywhere. Office buildings were "ordinary" unmarked places, that is, places where privilege was expected to operate and where systematic disadvantage was expected to be rare. Moreover, carpet was a ubiquitous artifact of contemporary living and might be found in almost any kind of building. A chemical exposure through carpet at the EPA headquarters, of all places, simultaneously signaled the subjugation of agency workers under Reagan and the lack of immunity that privilege was providing more generally.

[47] Ibid., 6–9.

[48] These symptoms were recorded in the health survey handed out by Local 2050 at the 25 May 1988 protest. NFFE Papers, NFFE Office, U.S. Environmental Protection Agency, National Headquarters, Washington, D.C.

[49] The quote and other meeting details were reported in a *Washington Times* article, the first of what would become a deluge of stories on the subject in the Washington, D.C., newspapers. (Dan Vukelich, "Employees Charge EPA's Own House Needs Cleaning Up," *Washington Times,* 28 April 1988.) This quote was also corroborated in interviews I conducted with Local 2050 leaders in 1996. The air monitoring was eventually written up into a final report. (R. Singhvi, R. D. Turpin, and S. M. Burchette, *A Final Summary Report on the Indoor Air Monitoring Performed at USEPA Headquarters, Washington, D.C., on March 4 and 5, 1988* [Edison, N.J., 1988].)

The irony of this expression of environmental anxiety quickly captured media and congressional attention.

Local 2050's protest tactics stood in sharp contrast to official EPA policy on indoor exposures. The EPA had, under duress, recently established an Indoor Air Division, which remained silent about the events happening in its own building. In general, the Indoor Air Division used the term "indoor pollution" as a discursive strategy to remove the problem of chemical exposures in nonindustrial workplaces from the realm of labor disputes.[50] The division had been added by Congress in response to a large-scale study of "total exposures," that is, a study of accumulated personal chemical bombardments.[51] The study, headed by EPA scientist Lance Wallace, had unexpectedly concluded that time spent indoors, not proximity to industrial sites, was most strongly correlated with high accumulated exposures. While this study was silent about the social locations of its research subjects—university students—and thus the possible effects privilege might have on the significance of indoor exposures, it did move the white noise of errant chemicals in "ordinary" spaces into the realm of perception, if only momentarily. Because of this study, Wallace acquired a reputation as the "father" of indoor air pollution.

In response to Local 2050's lobbying, Wallace was asked to head a study of Waterside Mall. Almost two years had passed since the carpet had first been laid, and the building had been aired out many times since. Any acute emissions from the carpet were long gone. Provided only with funding for stationary air monitors, Wallace expected to detect little: "more monitoring wouldn't have told us anything anyway. We were there a year after the fact and even studies where people have gotten there fairly quickly tend to fail to show anything."[52] Months after the initial complaints, air sampling measured no acute doses of a specific chemical, and therefore no acute chemical signal could be found amid the daily noise.

Predicting that no physical evidence would be found, the study also included an elaborate questionnaire, which had been given to all EPA employees in the building and had 3,955 responses. Trained in atmospheric physics, not sociology, Wallace (like the "housewives" turned toxic waste activists who practiced popular epidemiology) found himself spending his days analyzing a survey and assembling hundreds of pages of quantitative analysis, eventually published in four volumes between 1989 and 1991.[53] Ultimately, however, the survey allowed Wallace only to make some vague suggestions about dealing with the high prevalence of health symptoms at the EPA. No single cause could be extracted from the white noise of Waterside Mall. The search for a single cause generated imperceptibility in two mutually constitutive directions. First, any specific single exposure years ago was masked by the complex and accumulated bombardments, both social and physical, to which inhabitants of Waterside Mall were regularly subjected. Second, the environmental study designed as a search for a single toxic culprit obscured the social and political circumstances through which the EPA site had become so degraded.

Local 2050 doggedly persevered in its attempts to make visible the antagonistic

[50] Michelle Murphy, "Sick Buildings and Sick Bodies: The Materialization of an Occupational Illness in Late Capitalism" (Ph.D. diss., Harvard University, 1998).

[51] Lance Wallace, *The Total Exposure Assessment Methodology (TEAM) Study: Summary and Analysis,* vol. 1 (Washington, D.C., 1987).

[52] Wallace, interview by author, Washington, D.C., 30 April 1996.

[53] EPA, *Indoor Air Quality and Work Environment Study,* 4 vols. (Washington, D.C., 1989–1991).

workplace conditions under which the study was conducted. Invoking a clause in their collective bargaining agreement that guaranteed a role for EPA scientists–union members in studies of their own workplaces, they added a supplement to the published findings. Agency internal memos, newspaper articles, earlier monitoring attempts, and independent research on carpet filled the appendix. By publishing these documents, EPA scientists aspired to reframe the study in terms of the political conditions of its production. The lack of conclusion about the toxicity of carpet, which otherwise would have scripted indoor chemical exposure into its typical role of imperception, instead was held up as an example of the effects of corruption on EPA science. For Local 2050, at least the administration's maneuverings within the EPA were laid bare in the appendix.

Meanwhile, six of the sickest EPA employees sued the building's owner. At first, the jury awarded them $948,000 in damages, the biggest indoor pollution ruling to date. As with many other claims of low-level indoor chemical exposures made by the relatively privileged and disadvantaged alike, the defense reframed the scientists' illnesses as the result of anxiety—a psychological rather than a physical response. In 1995, the District of Columbia Superior Court overturned the damages, ruling that the building's owner could not be held responsible for psychogenic illnesses.[54] Not even their professional authority as EPA scientists could effectively give witness to the ill-health effects of toxic exposures occurring in their own bodies. Their claims were struck down with the same dismissal of hysteria usually saved for women and soldiers. The ground of professional authority and privilege shifted beneath their feet.

Local 2050's scientists-turned-activists had fashioned themselves as objective producers of knowledge because they believed their laboratory and technical procedures held the potential of disassociation from the power relations swirling through questions of chemical toxicity. Forming a union in defense of scientific ethics in the face of Reaganomics was an exceptional and even radical act for a group of scientists who saw themselves as defenders of objectivity. Their outspoken criticism of corporate influence on state science was exceptional in an era of intensified boosterism for economic versus environmental calculations of benefit and risk. Union leaders and the whistleblowers they defended persistently criticized official EPA findings before numerous congressional hearings on such issues as fluoride, asbestos, and aerosol propellants. Yet the scientists did not question the technical terms of their scientific practice, just its context. As a result, what became imperceptible were the ways chronic and low-level chemical exposures, as well as their uneven distribution, were consistently rendered invisible by the narrow criteria of toxicological proof that their discipline and the courts had developed. This was true even when scientists worked to the best of their abilities, in good faith.

EPILOGUE: SEEING RACE AT THE EPA

While Jack Gladney, the privileged protagonist of *White Noise,* had a hard time envisioning himself fleeing from a toxic airborne event, other people had less trouble recognizing their own vulnerability to toxic exposures. With the rise of the environmental

[54] *Bahura v. S. E.W Investors et al.,* No. 90CA10594 (D.C. Super. Ct. 1995). The jury came to its conclusion with the help of expert witness Abba Terr, who testifies around the country that multiple chemical sensitivity is a form of psychosomatic illness.

justice movement, reports by government scientists were regularly pitted against claims made by laypeople whose views of the world were shaped by analysis of their disenfranchised positions.

Much changed at the EPA in the years following formation of the union. During President Bill Clinton's administration, the number of "minorities" working in Grades 13 and higher at the agency more than doubled nationally, from 1,086 in 1993 to 2,348 in 2000.[55] The EPA headquarters' staff moved out of Waterside Mall in 1998 and, ironically, into the new Ronald Reagan Building. The departure of almost 5,000 EPA employees left Waterside Mall empty and in danger of dereliction. Local congresswoman Eleanor Holmes Norton compared the negative economic impact of EPA's departure on the southwest neighborhood to that suffered by communities after a "military base closure."[56] After considerable effort by environmental justice activists, Clinton signed an executive order in 1994 mandating that the agency develop "environmental justice strategies," including use of Title VI of the Civil Rights Act of 1964, which prohibited federal agencies from discriminating on the basis of race, color, or national origin. Before long, a group of African American EPA scientists and staff charged that endemic and virulent racism existed *within* the agency's headquarters. Scientists were finally naming the work of race that had been inside all along.

Marsha Coleman-Adebayo, an African American senior scientist and an expert in African studies, sued the EPA on grounds of racial and gender discrimination, winning a $600,000 settlement.[57] The Republican-chaired House Committee on Science was quick to hold a hearing titled "Intolerance at EPA: Harming People, Harming Science?" At the hearing, the NAACP came forward with the disturbing case of another agency employee, a midlevel administrator and African American woman, who had been ordered by her manager to clean a toilet in preparation for a visit from Carol Browner, the EPA's head administrator under Clinton.[58] In her testimony, Coleman-Adebayo compared the agency to a "21st century plantation."[59]

Coleman-Adebayo and a handful of others established a new activist organization for EPA employees, the EPA Victims Against Racial Discrimination (EPAVRD). Describing itself as "walking the last mile to freedom," EPAVRD voiced its activism through discourse and strategies well known from the early phase of the civil rights movement and its Social Gospel Christianity. The group even drew Reverend Al Sharpton to its protests and referred to Coleman-Adebayo as the "Rosa Parks of the EPA."[60] In contrast to Local 2050, EPAVRD strongly linked hostile workplace conditions to longstanding prejudice against African Americans and women, not to the administration's deregulation ideology or corporate influence. Moreover, they charged that systemic racism enacted by some of their peers not only discriminated against individuals but also distorted the agency's work. How could the EPA hope to address

[55] Carol Browner, Administrator of the USEPA, Statement before the Committee on Science, House of Representatives, 4 Oct. 2000, http://www.house.gov/science/106_hearing.htm.

[56] Senate Banking Committee, "Senator Gramm's Letter to Acting SEC Chairman Laura Unger Regarding SEC Plan to Move Headquarters," press release, 19 July 2001.

[57] *Coleman-Adebayo v Browner, U.S. Environmental Protection Agency,* No. 1.98cv1939 (D. D.C., 5 Aug. 1998).

[58] Leroy W. Warren Jr., chairman of the NAACP Federal Sector Task Force, Statement before the Committee on Science, House of Representatives, 4 Oct. 2000, http://www.house.gov/science/106_hearing.htm.

[59] Jack White, "How the EPA Was Made to Clean Up Its Own Stain—Racism," *Time,* 23 Feb. 2001.

[60] Header of the EPAVRD Web site: http://www.epavard.org (accessed 16 April 2001).

environmental racism when the agency itself was racist? For EPAVRD, discrimination against African American scientists was a manifestation of the same discrimination that produced racialized distributions of hazard.

EPAVRD saw the government as complicit in the historically continuous performance of discrimination. Instead of playing out its opposition in the details of science as Local 2050 had, EPAVRD lobbied for a legislative change that would constrain the government itself. They dubbed the legislation "the first civil rights law of the 21st century." The NO FEAR bill (Notification of Federal Employees Anti-Discrimination and Retaliation Act) was a legislative strategy to protect minority employees within government agencies from discrimination. Though the lobbying in favor of this bill overwhelmingly focused on racial discrimination, tucked in the legislation was the muted inclusion of protection for whistleblowers.

The NO FEAR bill enjoyed bipartisan support in a way no criticism of corporate influence could. It was premised on deterring discrimination by making agencies pay the money for settlements out of their budgets, whereas previously the money had come out of a common federal fund. In the preamble, preventing discrimination and protecting whistleblowers was defended on the basis that "good science requires a tolerance of opposing viewpoints."[61] The argument implicitly made was that subjugated standpoints provided valuable "viewpoints" that differed from those produced by insisting on a single "neutral" standpoint. Opposing viewpoints were necessary for the EPA to analyze environmental racism without prejudice. For EPAVRD, diverse subject positions were necessarily constitutive, rather than corrupting, of knowledge production. For EPAVRD, however, discrimination at the unsettled turn of the millennium was not an act reserved only for those who benefited from white privilege—senior black administrators were also the perpetrators of racism against their black colleagues. One's "race" and the way one exercised racialized arrangements were anything but straightforward equations. The bill was signed into law by President George W. Bush on 15 May 2002.

In this paper I have tried to show that racialized privilege shaped science in the 1980s, even when "race" was not explicit to the scientists' self-fashioning or their subjects of study. The insecurity of white privilege and the authority of a "view from nowhere" within the late twentieth century have been, I would argue, intimately connected during a historical moment when *what* one could see was increasingly linked to *where* one was seen to stand. The regimes of imperceptibility I have tried to link—the unmarked exercise of racialized privilege and the indetectability of chemical exposures in 1980s environmental science—did not just coexist but also touched and sustained one another. The oppositional stances of Local 2050 and EPAVRD enacted the work of race, one by drawing on the unspoken terms of racialized privilege and the other by marking racialized disadvantage. The scientists of Local 2050 fought for the restoration of their right to a neutral workplace without undue corporate or administration influence; the members of EPAVRD fought for civil rights protection against racial discrimination within the government, thereby fostering "opposing viewpoints."

[61] *Notification and Federal Employee Anti-Discrimination and Retaliation Act of 2001,* HR 169, Introduction to the House, 106th Cong., 2d sess., *Congressional Record,* 3 Jan. 2001. (The same language had been used when the legislation was introduced as HR 5516 on 19 Oct. 2000.) This language was subsequently deleted in the version passed.

Whether "race" is named or not, I have tried to understand it here not as the property of individuals but as a product of uneven and changing distributions of privilege and disadvantage at the end of the twentieth century. The work of race, seen and unseen, permeated the day-to-day arrangements of science. The EPA was not exceptional or worse in this regard. The work of racialized privilege at the agency is discussed here as an example of the pervasive force of race in all "normal" science. Race, science, and chemical exposure were being made through each other amid sedimented and yet shifting distributions of power that shaped not just who was authorized to make knowledge but also the very distributions of hazard being studied. These included the landscapes of chemical exposure that differed between a bourgeois mall and a maquiladora, or between an office building and a hazardous waste dump. While "race" may have been a subject rarely spoken of in the labs and offices of the EPA in the 1980s, race wove the physical fabric of neighborhoods and buildings, exposures and protections, questions and methods that scientists lived with daily.